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| APPLICATION NO.             | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------|-------------|----------------------|---------------------|------------------|
| 10/696,440                  | 10/28/2003  | June Ho Park         | 10125/4124          | 6766             |
| 7590 07/26/2005             |             |                      |                     |                  |
| Brinks Hofer Gilson & Lione |             | EXAMINER             |                     |                  |
| Post Office Box 10395       |             | WANG, GEORGE Y       |                     |                  |
| Chicago, IL 60610           |             |                      |                     |                  |
|                             |             | ART UNIT             | PAPER NUMBER        |                  |
|                             |             | 2871                 |                     |                  |

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/696,440             | PARK ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | George Y. Wang         | 2871                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 27-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/3/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of 11-26 in the reply filed on May 2, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 17-18, and 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Gunjima et al. (U.S. Patent No. 5,587,816, hereafter "Gunjima").
4. As to claim 1, Gunjima discloses a liquid crystal display (LCD) device (fig. 2, ref. 12) comprising a lower and upper substrate facing each other with a liquid crystal layer between the substrates (fig. 2, ref. 11; col. 2, lines 9-15), a first polarizing plate (fig. 2, ref. 10) on the upper substrate, a second polarizing plate (fig. 2, ref. 9) below the lower

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substrate, a light diffusion layer (fig. 2, ref. 8) below the second polarizing plate, and a backlight unit (fig. 2, ref. 1-3) below the second polarizing plate.

5. Regarding claims 17-18, Gunjima discloses the LCD as recited above where the backlight unit comprises a light-scattering means comprising a light-diffusing plate (fig. 2, ref. 8), a first prism sheet (fig. 2, ref. 7) below the light-diffusing plate, and a second prism sheet (fig. 2, ref. 13) below the first prism sheet.

6. As per claims 20-24, Gunjima discloses the LCD as recited above where the light-diffusion layer (fig. 2, ref. 8) is adjacent to and contacts the backlight unit (fig. 2, ref. 1-3), a plurality of projections (fig. 2, ref. 7) are formed on one of the surfaces of the light-diffusion layer and where the projections contact the backlight unit without substantially damaging the backlight unit.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 12-16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunjima in view of Jiang et al. (U.S. Patent No. 6,573,961, hereafter "Jiang").

9. As to claim 12-13, Gunjima discloses the LCD as recited above with a light-diffusion layer (fig. 2, ref. 8) and adhesive agents (col. 19, lines 3-6), however, the reference fails to specifically disclose the second polarizing plate comprising a first adhesive layer, a first passivation layer, a polarizer, a second passivation layer, a second adhesive layer, a  $\lambda/4$  phase shift plate, a third adhesive layer, a Cholesteric Liquid Crystal (CLC) layer, a third passivation layer, and the light-diffusion layer in order of proximity to the lower substrate.

Jiang discloses an LCD comprising second polarizer having a first adhesive layer (910), a first passivation layer (fig. 2B, ref. "passivation layer"), a polarizer (ref. 2B, ref. 11), a second adhesive layer (900), a  $\lambda/4$  phase shift plate (fig. 2,B, ref.  $\lambda/4$  layer), a third adhesive layer (col. 39. line 60, col. 40, line 4), a Cholesteric Liquid Crystal (CLC) layer (fig. 2B, ref. 10), and the light diffusion layer (fig. 2B, ref. 400).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a first adhesive layer, a first passivation layer, a polarizer, a second passivation layer, a second adhesive layer, a  $\lambda/4$  phase shift plate, a third adhesive layer, a Cholesteric Liquid Crystal (CLC) layer, a third passivation layer, and the light diffusion layer since one would be motivated to minimize viewing-angle dependent wavelength shifting effects (col. 28, lines 47-48), ensure polarized light transmitted does not orthogonal light components which result in significant distortion (col. 29, lines 5-13). Ultimately, this serves to provide an LCD panel capable of producing high brightness color images (col. 4, lines 59-61). Furthermore, although Jiang does not disclose all the elements above, namely the second and third passivation layers, it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Moreover, Jiang does not disclose all the elements in order of proximity to the lower substrate, but since it has been held that rearranging parts of an invention involves only routine skill in the art, it would have been obvious as well to arrange the second polarizing elements in this order. *In re Japiske*, 86 USPQ 70.

10. Regarding claims 14-17, Gunjima discloses the LCD as recited above where a plurality of projections of a round or smooth shape (Fresnel, prism, or lenticular shape (col. 10, lines 58-63; fig. 2, ref. 7) are formed on the surface of the light-diffusion layer (fig. 2, ref. 8).

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11. As per claim 25, Gunjima discloses the LCD as recited above where the adhesive agent are devoid of added beads (col. 19, lines 3-6).

12. Claims 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunjima in view of Jiang, and in further view of Uchiyama et al. (U.S. Patent No. 6,177,153, hereafter "Uchiyama").

Gunjima, when modified by Jiang, discloses the LCD as recited above, however, the reference fails to specifically disclose the total Haze of the first polarizing plate and the Haze of the second polarizing plate being at least about 40% and where the light-diffusion layer produces an amount of Haze and a density of the projections is less than a density of beads that would have to be to obtain the same amount of Haze.

Uchiyama discloses orientation films for LCDs where the total Haze of the first polarizing plate and the Haze of the second polarizing plate being at least about 40% (col. 4, lines 30-64) and where the light-diffusion layer produces an amount of Haze and a density of the projections is less than a density of beads that would have to be to obtain the same amount of Haze (col. 26, lines 41-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have total Haze of the first polarizing plate and the Haze of the second polarizing plate being at least about 40% and where the light-diffusion layer produces an amount of Haze and a density of the projections is less than a density of beads that would have to be to obtain the same amount of Haze since one would be motivated to a display with improved viewing angle (col. 4, lines 40-41). This is

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achieved by maintained by keeping the transmittance percentage that depend on incident angle because a haze of the film will optimize conditions for high transmittance (col. 4, lines 30-37).

**Conclusion**

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gw  
July 25, 2005



**KENNETH PARKER**  
**PRIMARY EXAMINER**